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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,104	02/11/2004	Tadahiro Ohmi	SUGI0138	2617

24203 7590 05/21/2004

GRIFFIN & SZIPL, PC  
SUITE PH-1  
2300 NINTH STREET, SOUTH  
ARLINGTON, VA 22204

EXAMINER

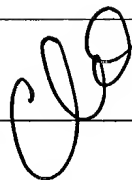
KRISHNAMURTHY, RAMESH

ART UNIT PAPER NUMBER

3753

DATE MAILED: 05/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center"><b>Office Action Summary</b></p>	<b>Application No.</b> 10/775,104	<b>Applicant(s)</b> OHMI ET AL.	
	<b>Examiner</b> Ramesh Krishnamurthy	<b>Art Unit</b> 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 4 and 9 - 17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4, 10 and 14 is/are rejected.
- 7) ☒ Claim(s) 9, 11 - 13 and 15 - 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/734,640.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)<br>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)<br>3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>02/11/2004</u> | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____<br>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)<br>6) <input type="checkbox"/> Other: _____ |
|--|--|

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This office action is responsive to preliminary amendment filed 02/11/2004.

**Claims 4 and 9 – 17 are pending.**

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 4, 10 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Prior Art disclosed in Fig. 15 in view of Nishino et al. (US 5,669,408)

The prior art shown in Fig. 15 of the instant application, discloses a parallel divided flow fluid supply apparatus, comprising: a pressure regulator (RG) having an upstream side (denoted by  $P_o$ ) and a downstream side from which a plurality of flow passages are disposed such that a single flow of fluid from said pressure regulator (RG) is branched into said parallel flow passages; a plurality of flow control valves (V1, V2) disposed in said flow passages; and a plurality of flow control systems (MFC1, MFC2)

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for controlling of the flow rate, one controller (either MFC1 or MFC2) installed in each flow passage between two of said flow control valves (V1 and V2), disposed upstream and downstream of said controller respectively.

The prior art disclosed in Fig. 15 does not explicitly disclose the controller (MFC1) to be a pressure flow control system that regulates the flow rate based on the pressure upstream of the controller.

Nishino et al. discloses (Fig. 1) a pressure flow control system (3, 4, 5, 6, 7a, 7b, 8a, 8b) that regulates the flow rate based on the pressure upstream of the controller for the purpose of obtaining enhanced measuring precision (Col. 2, lines 7 – 11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided in the prior-art flow arrangement disclosed in Fig. 15 of the instant application, a pressure flow control system that regulates the flow rate based on the pressure upstream of the controller, for the purpose of obtaining enhanced measuring precision, as recognized by Nishino et al.

The pressure flow control system of Nishino et al. comprises,

an orifice (5) formed downstream of the control system and upstream of the downstream flow control valve (V2 in Fig. 15 of the application or valve (9) in Fig. 1 of Nishino et al.) ;

a control valve (2) installed upstream of said orifice (5) and downstream of the upstream flow control valve (V1 in Fig. 15 of the application);

a pressure detector (3) disposed between said orifice (5) and said control valve (2) for detecting the pressure P1 between said control valve (2) and said orifice (5);

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a calculation control circuit (6) wherein with a pressure on an upstream side of said orifice (5) set to be twice of more higher than a pressure downstream side (Col. 3, lines 64 – 65) of said orifice (5), the instantaneous flow rate is calculated as  $Q_c = KP^1$  ( $K = \text{constant}$ ) from the pressure on the upstream side of said orifice (5) detected by said pressure detector (3) (Col. 4, lines 15 – 16) and a difference between an instantaneous flow rate  $Q_c$  and a preset flow rate  $Q_s$  is outputted as a control signal  $Q_y$  (Col. 4, lines 16 – 19); and

a drive (14) connecting said control valve (2) and said calculation control circuit (6) for receiving the control signals from said calculation control circuit (6) and sending the control signals to said control valve (2) causing said control valve operating to bring the control signal  $Q_y$  to zero (Col. 4, lines 20 – 23).

4. Claims 9, 11 – 13 and 15 – 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The document JP 5-341849 discloses a fluid flow controller that is configured to minimize fluctuations in fluid flow rate that is transiently caused.

6. This is a continuation of applicant's earlier Application No. 10/162,552. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Response to Arguments***

Applicant's arguments filed 02/11/2004 have been fully considered but they are not persuasive with respect to claims 4, 10 and 14. Essentially, the applicant is arguing that the 'unexpected' results in Fig. 9 are evidentiary of non-obviousness of the invention claimed in claims 4, 10 and 14. The secondary evidence in the form of "unexpected" result shown in Fig. 9 of the disclosure has been carefully considered and the conclusion of the examiner is that the evidence in Fig. 9 is not commensurate in scope with the invention claimed in claims 4, 10 and 14 of the instant application. The evidence in Fig. 9 pertains to the changes in flow characteristics in a given flow line of a plurality of such lines when another flow line in the plurality of flow lines is opened to flow, the plurality of flow lines branching off from a common inflow line. Thus the evidence pertains to interaction between at least two active flow lines in a plurality of flow lines and such an interaction is not recited in claims 4, 10 and 14 thereby rendering the evidence and arguments pertaining to it moot.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramesh Krishnamurthy whose telephone number is (703) 305 - 5295. The examiner can normally be reached on Monday - Friday from 8:30 AM to 5:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Scherbel, can be reached on (703) 308 - 1272. The fax phone number for the organization where this application or proceeding is assigned is (703) 872 - 9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 - 0861.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RK

Ramesh Krishnamurthy  
Examiner  
Art Unit 3753

  
David A. Scherbel  
Supervisory Patent Examiner  
Group 3700